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Do not assume content reflects current scientific knowledge, policies, or practices.





grog Ball 1940 mum CATALOG

NOTE—PLEASE

While we were never quite so well prepared to supply your Mum cutting needs as we are for 1940, we strongly urge EARLY PLACING OF ORDERS. Demand for varieties varies greatly every season, making it difficult to closely anticipate them. While we watch the behavior and popularity of them in all sections and try to regulate supplies accordingly, every season unexpected demands develop; and, of course, shortages of some varieties. So order as early as you can, bearing in mind that all orders are filled in rotation as received. In common fairness, we cannot or will not make exceptions to this rule.

We insist on thoro State inspection of all our propagating stock, especially for midge. This enables us to guarantee all stock furnished by us to be clean, free of disease or insects, well rooted, and carefully packed.

GEO. J. BALL, Inc.

INSTRUCTIONS FOR ORDERING

NOTE: When arrangements are made to ship cuttings on open account, it is understood they are sold on strictly 60 days net basis. The close margin under which these cuttings are sold, makes these terms necessary.

SPECIAL EARLY ORDER DISCOUNT. When an order is placed two months, or more, in advance of delivery date, a discount of 5% is allowed, provided delivery date is April 1st, or later. Be sure to show on your order, date cuttings are to be shipped.

Special Discounts for Large Orders: The following discounts, for quantities given, will apply on orders placed at one time for the quantity on which discount is taken.

5% discount for an order of 10,000 $7\frac{1}{2}$ % discount for an order of 25,000 10% discount for an order of 50,000

Rate per 100 Rate per 10 Rate per 100 Rate per 10 \$ 3.00 Please note schedule at right show-\$.50 \$ 7.00 \$1.25 ing rates per 100 and correspond-4.00 .50 1.50 8.00 5.00 ing rates per 10. We do not supply 1.00 12.00 2.00 less than 10 of any variety, except 6.00 1.00 15.00 2.50 first year Novelties.

VERY IMPORTANT In order to produce cuttings at present prices, the business is run on a very close margin. For this reason we cannot break bundles of 25 cuttings as it adds considerable to the cost.

Please note, therefore, following rule will apply on all orders:

When less than 25 of a variety is ordered they will be billed at the ten rate, as per table shown above.

25 of a variety will be billed at the 100 rate.

When more than 25 of a variety is ordered quantity MUST BE IN MULTIPLES OF 25.

250 of one variety will be billed at the 1000 rate.

PLEASE NOTE If your order should total 900 cuttings (for example: 100 each of 9 varieties at \$3.00, total is \$27.00) while if 1000 are ordered, the thousand rate would apply. This point should be watched in figuring your order so that you may have advantage of the thousand rate on the entire order. WATCH THIS.

If order is wanted C.O.D. be sure to enclose check for at least 50% of the amount.

SHIPPING INFORMATION All our stock is propagated at Barberton, Ohio, from where it is shipped by Express COLLECT.

If cuttings are wanted by Parcel Post, add sufficient postage as all prices are figured F.O.B. Barberton, Ohio. Approximate weights of cuttings are as follows: 50 cuttings, 2 lbs.; 100, 4 lbs.; 500, 15 lbs.; 1000, 24 lbs. You can secure the amount of postage necessary from your local Post Office.

TO OUR CANADIAN CUSTOMERS

Be sure to get a permit from your Department of Agriculture at Ottawa. As all shipments go by Express, you are to forward us the PERMIT NUMBER ONLY, holding the permit itself which is necessary to clear the shipment from customs on arrival. In case of Parcel Post shipments, apply for a Parcel Post Permit, and send the label to us with your order.

PROFIT IN MUMS

is a natural color shot made at our place Oct. 12th from our shaded stock. White Mum is an A No. 1 variety—Marketeer—2 flowers to a plant. Same with the Yellow and Bronze which are Golden Pearson and Mrs. David F. Roy. Light Bronze single is Mason's Bronze. Dark Bronze in vase Buckingham Bronze.

Like most greenhouse crops, the margin in Mums is close today and if not well and economically grown, it disappears entirely,—might even become a substantial loss. Among causes for this, unsuitable varieties frequently play a more important part than some realize. The grower must, thru trying them, find out which are best suited to his demand and conditions. The variety suggestions for various purposes found with our list is carefully considered by us. Only such as seem to give quite general satisfaction are so

indicated. Novelties, of course, cannot be included for obvious reason; but only such as are a distinct advance with the originator are offered.

We, therefore, feel justified in recommending them. We do occasionally get a new one that doesn't click except under the originator's conditions or method of handling, but that is the inevitable price of progress. On the other hand, many new ones are discarded without a fair trial, to be taken up later with excellent results. Most veteran Mum growers have taken up and discarded the variety Bonnaffon many times the past 40 years. It was barely recognized when introduced; yet it has probably been the most profitable American Chrysanthemum. The question is frequently asked, "Do varieties or does stock play out?" We do not believe it does. However, a grower's stock can and frequently does become so weakened thru disease or insects or thru the continual use of indoor grown stock plants that a change of stock should be made. To grow them in a hot greenhouse all summer where the effect of sun and air cannot be felt is certain to weaken the stock plants. But the effect is not basic or lasting. If such stock is grown out in the open a season or two, it will recover its original vigor. But this costs time. Needless to say, this is an age of specializing. Many retail growers find it definitely more profitable to buy such specialties as certain pot plants, roses, etc., not only because the overhead on small lots is greater than that of the specialists, but the specialist does it better—generally, much better. The many costs connected with producing Mum cuttings is becoming more generally appreciated, not only direct costs such as insecticides, space occupied by stock plants, value of time propagating when you are very busy in Spring, but in indirect costs as well. They include such as not having what you want when you want it, using varieties on hand instead of being able to select exactly what you want and cost of cuttings lost in the sand. And,—midge. Few experienced growers are free of it, and very few appreciate the cost of fighting it. Whether your requirements are 10 or 100,000, let us hear from you.

NEW VARIETIES

On this and following page you will find the season's approved novelties. They are all from well known dependable raisers. We have personally acquainted ourselves with all these varieties; and if given a chance, they will be found a distinct advance in American Chrysanthemums.

DePETRIS Introductions NATOMA

An excellent large flowered Pompon which matures about October 25. A good producer and sturdy grower with rigid stems and beautiful foliage. Possesses good form and excellent spray formation. Color, brilliant tomato red with an attractive sheen typical to Korean hybrids. An extremely attractive shade which makes it stand out above others. We recommend Natoma as an excellent addition, which is certain to become popular as an excellent early Pompon with an attractive fall color. A good variety for shading.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

DECEMBER GOLD

A large Pompon maturing December 5 and later. Excellent growing habit with good stem and foliage. Intense gold color which is quite brilliant and appealing. An excellent producer, which should make it a favorite with both grower and retailers.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

PROSPERITY

A late deep pink Pompon which matures about the 10th of December. An excellent grower and heavy producer which will meet with favor with anyone who can use this color.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

SILVER EMBLEM

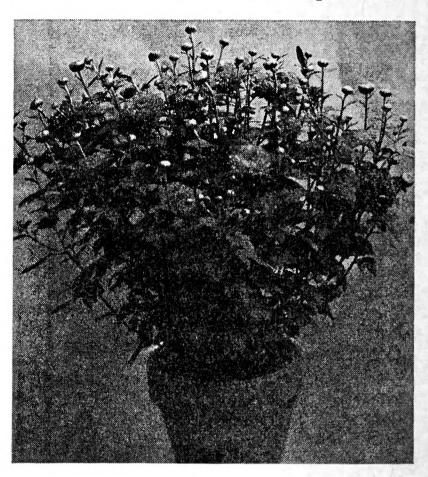
A white Anemone with creamy white cushion suitable for growing in sprays. An excellent grower with good stem and foliage, with average production. The originator does not claim this is an outstanding variety, but it is the best Daisy type Anemone to date. Very useful where pure white flowers are needed. Matures about November 1.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

BRISTOL Nurseries Introductions MELODY

A splendid free-flowering single Korean quite distinct in its rugged branching habit and fine effect. Flowers are all of medium size, with three rays of petals and slightly cupped in form. It handles splendidly as a cut flower. Color is a lovely soft daphne shade. In full flower late October. Height 3 feet.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.



POMPONETTE. Naturally compact, branching and early, this new soft bronze will be wanted by pot plant growers.

POMPONETTE

A new and distinct type of Pompon particularly suited to pot culture. Its habit is dwarf, compact and branching, forming a finished plant about 12-15 inches in height. Grown in cold frames without protection it will flower naturally about September 20th—under glass in early October, so that its season can be timed readily. It requires little or no pinching. Blossoms are comparatively large, 2½ inches across and very double. Color is warm bronze in the bud or partially opened flower finishing a clear primrose yellow. It should prove an ideal subject for pot culture.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

Novelty Section (continued)

YODER BROTHERS Introductions SWAN

A large white Anemone with a crystal clear white, informal type petal, of good substance, and a chartreuse green center which gradually changes with fuller development to a clear white. Blooms December 1-10. Flowers attain a diameter of about 4 inches when disbudded to 3 flowers per spray; can also be grown disbudded to 1 flower. A free grower with relatively small foliage. Takes water freely; ships unusually well and is a very good keeper.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

GLEAM

A large Anemone with a low well proportioned center. Color is a clear deep sulphur yellow which does not fade. Blooms about December 5. Diameter of flower is about 5 inches when disbudded to 1 flower or about 3½ inches when 3 flowers are allowed to develop on a spray. This variety has outstandingly growth, is very productive, and has exceptional keeping qualities. The flower has all the grace of the large single without the heavy appearance \mathbf{of} so Anemones.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

BLAZE

A red single which blooms December 10-15 and can be held for Christmas. Color is a deep glowing cardinal red. Flowers are 2 inches in diameter on long graceful petioles. This variety is a vigorous grower, tall, has attractive small dark green foliage; is free of blind growth; a good producer and easy to grow.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

FAWN

A bright golden yellow single. Blooms December 5. Flowers are 2 inches in diameter, with 5-6 rows of sturdy petals. This variety has a good wiry habit of growth, attains a medium height and fills the need for a good quality, late, yellow single.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

VIKING

A heavy petaled bronze single. Color is an intense, deep bronze on immature petals shading to a golden bronze as they mature. Very striking under artificial light. Blooms December 1. Flowers attain a diameter of $2\frac{1}{2}$ inches. The 5-6 rows of petals are so arranged as to give depth and design to the flower. This variety makes a strong vigorous growth and is a fair producer.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

PEARL

A large Pompon, clear opaque white, of unique globular form. Blooms about November 20, just after Chicago Pearl, which variety it resembles. A fast growing, strong, wiry stem; relatively small foliage, a good producer.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

SNOW

A medium sized ivory white Pompon that blooms December 25 and later. Flowers are well spaced on a good strong spray. Growth is very sturdy; plants attain medium height. This is a good quality Pompon to bloom with Garza Supreme.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

YELLOW PRINCETON

A bright yellow sport from Princeton. Color is a clear yellow with none of the orange shading found in variety Princeton.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

DARK PINK VALENCIA

(Thos. J. Sullivan)

A deep pink sport from Valencia. It differs from that variety in color only. The color however is sufficiently intensified to make this a distinct new addition to the list of pink singles.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

VAUGHAN'S Introductions YELLOW CHATTANOOGA, IMP.

A sport of Chattanooga that retains its vigorous growth and fine form. The color is several shades deeper than Yellow Chattanooga; certainly a valuable addition to the late blooming varieties.

Price for Rooted Cuttings: \$2.50 per 10, \$15. per 100, \$125. per 1000.

Large Flowering Commercial Varieties

In this catalog are two duplications of names as follows:

December Glory—A large mum.

December Glory—A pompon.

Innocence—A hardy Korean pompon
Smith's Innocence—A white anemone

When either of these varieties are ordered, kindly specify clearly which is intended.

NOTE

When variety **Gladys Pearson** is ordered, original stock will be shipped. When **Dark Bronze Gladys Pearson** is requested, Oak Leaf will be shipped.

Under Hardy Chrysanthemums we have listed variety "Amelia." This is identical with variety "Pink Cushion."

- X—Extra good or generally accepted best varieties.
- S—Indicates varieties we find most suitable for shading.
- P-Indicates varieties suitable for Pot Plants.

Two letters mean, besides being extra good, variety is recommended for Pots or Shading.

NOTE CAREFULLY INSTRUCTIONS FOR ORDERING ON PAGE TWO

			Select		Pri	ce per
	Name and Description	Height	Bud	Matures	100	1000
	Adonia. Pink	Med.	Sept. 5	Oct. 25	\$7.00	\$65.00
	Albatross. Pure white	Med.	Ter. Bud	Oct. 25	12.00	100.00
XP	Ambassador. Large long stemmed white	Med.	Ter. Bud	Oct. 20	3.00	27.50
	Andrew Schmidt. Dark pink. Sport from Seide-					
	witz	Tall	Sept. 15	Nov. 30	3.00	27.50
X	Anna Kaskas. Golden bronze	Tall	Sept. 5	Nov. 5	3.00	27.50
XP	Apricot Queen. Orange bronze	Short	Sept. 5	Nov. 1	3.00	27.50
XS	Betsy Ross. Finely shaped white	Tall	Aug. 25	Nov. 5	3.00	27.50
	Blazing Gold. Golden yellow	Med.	Ter. Bud	Oct. 25	12.00	100.00
P	Bonnaffon DeLuxe. Golden yellow	Short	Sept. 10	Nov. 20	5.00	40.00
	Bonnaffon Shibuya. Yellow	Short	Ter. Bud	Nov. 20	3.00	27.50
ΧP	Bronze Frick. Bronze. Sport from Helen Frick		Sept. 10	Nov. 25	3.00	27.50
	Bronze Gom. Dark bronze	Tall	Sept. 10	Nov. 20	3.00	27.50
P	Bronze Lode. Light bronze. Sport from Gold Lode	Med.	Aug. 25	Oct. 1	4.00	35.00
XS	Camilla. White	Tall	Aug. 25	Oct. 18	3.00	27.50
ΧP	Cardonia. Deep rich yellow	Med.	Sept. 5	Nov. 1	3.00	27.50
ΧP	Celestra. Bright yellow	Med.	Ter. Bud	Oct. 10	3.00	27.50
	Chadwick Bronze. Bronze	Med.	Ter. Bud	Nov. 25	3.00	27.50
	Chadwick Golden. Yellow	Med.	Ter. Bud	Nov. 25	3.00	27.50
	Chadwick Pink. Pink	Med.	Ter. Bud	Nov. 25	3.00	27.50
X	Chadwick White. White	Med.	Ter. Bud	Nov. 25	3.00	27.50
	Chas. Rager. White	Med.	Sept. 15	Nov. 10	3.00	27.50
	Chas. W. Johnson. A standard white	Med.	Sept. 10	Oct. 30	3.00	27.50
	Chattanooga. White	Med.	Sept. 20	Nov. 25	3.00	27.50
P	Christina. White. Sport from Rose Chochard	Short	Aug. 25	Oct. 20	3.00	27.50
	Chrysolora. Large incurved light yellow	Med.	Aug. 15	Oct. 15	3.00	27.50
	Citronella. Light yellow	Short	Aug. 31	Oct. 25	3.00	27.50
	Col. F. M. Alger. Pernet yellow	Med.	Sept. 5	Nov. 5_	8.00	75.00
	Columbus Dispatch. Deep yellow. Large bloom		Sept. 1	Nov. 15	3.00	27.50
	Corona. Deep yellow	Tall	Ter. Bud	Oct. 25	3.00	27.50
	December Beauty. White, tinged with pink	Med.	Oct. 1	Dec. 1	3.00	27.50
	December Beauty, Imp. Pure white. Sport		0			2000
	from December Beauty		Oct. 1	Dec. 1	8.00	75.00
	December Glory. White		Sept. 30	Dec. 1	3.00	27.50
	December Queen. Yellow	Tall	Ter. Bud	Dec. 1	3.00	27.50

Enclose Your Mum With Your Seed Order

Large Flowering Commercial Varieties (Continued)

			Select		Pric	e per
	Name and Description	Height	Bud	Matures	100	1000
XS	Detroit News. Finest early bronze		Aug. 30	Oct. 25	3.00	27.50
v	Distinction. Pink		Ter. Bud	Nov. 25	3.00	27.50
X	Dr. Enguehard. Rose pink	Mea. Short	Sept. 5	Nov. 25	3.00	27.50
D	Edgar Stillman Kelly. White	Med.	Early Sept. 15	Early Nov. 15	3.00 3.00	27.50 27.50
	Edwin Seidewitz. Bright pink	Tall	Sept. 15	Nov. 30	3.00	27.50
	Evening Star. Pink	Tall	Sept. 5	Nov. 1	3.00	27.50
P	Favorite. White	Med.	Sept. 5	Nov. 15	3.00	27.50
P	Floyd Gibbons. Salmon pink with buff reverse	Short	Sept. 15	Nov. 10	3.00	27.50
	Friendly Call. Buff yellow	Tall	Ter. Bud	Nov. 25	5.00	40.00
	Friendly Rival. Large golden yellow	Med.	Sept. 10	Nov. 20	3.00	27.50
XP	Garnet King. Deep, bright red	Med.	Sept. 20	Nov. 20	3.00	27.50
	Gladys Pearson. Good light bronze	Med. Short	Sept. 30 Sept. 10	Nov. 25 Nov. 25	3.00 3.00	27.50
YP	Glenview. Bronze	Med.	Ter. Bud	Nov. 1	3.00	27.50 27.50
	Gold Lode. Golden yellow	Med.	Aug. 25	Oct. 1	3.00	27.50
	Golden Arbina. Golden yellow		Ter. Bud	Nov. 25	5.00	40.00
		Med.	Sept. 15	Nov. 20	3.00	27.50
XSP		Short	Aug. 25	Nov. 1	3.00	27.50
	Golden Glow, Imp. Yellow	Med.	Aug. 1	Oct. 1	3.00	27.50
X	Golden Mrs. Ross. Golden yellow. (Improved	T 11	5 1 0 .	N		
	Nellie T. Ross)	Tall	Early Oct.	Nov. 30	3.00	27.50
	Golden Oak. Golden bronze	Med. Med.	Ter. Bud Aug. 25	Nov. 20 Oct. 10	6.00	50.00
YC	Golden October. Rich golden yellow	med.	Aug. 23	OC1. 10	3.00	27.50
73	Pearson	Med.	Sept. 30	Nov. 25	3.00	27.50
	Golden Seidewitz. Yellow	Tall	Sept. 15	Nov. 30	3.00	27.50
SP	Golden Wave. Yellow	Short	Sept. 5	Oct. 20	3.00	27.50
XS	Good News. Yellow. Sport from Detroit News.					
	Excellent	Med.		Oct. 25	3.00	27.50
- 3	Governor Green. Crimson with old gold reverse		Aug. 15	Oct. 15	3.00	27.50
P	Harvard. Crimson		Sept. 30	Nov. 30	3.00	27.50
SP	Helen Frick. Pink		Sept. 10 Aug. 2 5	Nov. 25 Oct. 25	3.00 3.00	27.50 27.50
P	Honey Dew. Yellow		Ter. Bud	Nov. 15	3.00	27.50
	Indianapolis Pink. Excellent light lavender.				2.00	_,,,,
	Darker reverse	Med.	Ter. Bud	Nov. 15	6.00	50.00
	Indian Chief. Deep reddish bronze; golden buff					
	reverse		Sept. 5	Nov. 10	4.00	35.00
XS	Indianola. Light bronze		Aug. 25	Oct. 10	3.00	27.50
CD	Jubilee. Clear Bonnaffon yellow		Ter. Bud	Nov. 15	12.00	100.00
SP	J. W. Prince. Light pink. (Improved Chieftain)	Short	Ter. Bud Aug. 30	Oct. 15 Nov. 1	3.00 3.00	27.50
AJI	Keystone. Bronze		Aug. 30	Oct. 25	3.00	27.50 27.50
X	Leroy Zang. Yellow. Sport from Golden Pearson		Sept. 30	Nov. 25	3.00	27.50
	Loretta. Intense yellow		Aug. 30	Nov. 30	7.00	65.00
	Lustre. Pink		Aug. 25	Oct. 10	3.00	27.50
	Major Bonnaffon. Yellow	Short	Sept. 10	Nov. 20	3.00	27.50
	Major Edward Bowes. Pink; medium length	A A 1	A 30	0 . 20	2.00	
~	Marie de Petris. Yellow		Aug. 30	Oct. 20	3.00	27.50
^	Marketeer. Finest late white		Sept. 15 Ter. Bud	Nov. 25 Nov. 20	3.00 6.00	27.50 50.00
X	Mefo. White		Sept. 20	Nov. 20	3.00	27.50
3	Miss Flora Bowers. White	Med.	Sept. 5	Nov. 30	7.00	65.00
	Mistletoe Bronze. Bronze	Med.	Sept. 30	Dec. 15	3.00	27.50
	Mistletoe Golden. Yellow		Sept. 30	Dec. 15	3.00	27.50
X			Sept. 30	Dec. 15	3.00	27.50
	Mistletoe White, Imp. White		Sept. 30	Dec. 15	3.00	27.50
	Mohawk Chief. Crimson		Oct. 1 Sept. 10	Nov. 30	3.00	27.50
X	Monument. White	Med.	Sept. 10	Nov. 15	3.00	27.50
	yellow	Med.	Ter. Bud	Nov. 15	3.00	27.50
	,				2.00	

Poor Varieties Cost Exactly As Much To Grow As Good Ones

Large Flowering Commercial Varieties (Continued)

			Select			e per
	Name and Description	Height	Bud	Matures	100	1000
X	Mrs. David F. Roy. Crimson with bronze re-	CI .	C . 15	N. 15	2.00	27.50
YCD	verse; excellent	Short	Sept. 15 Aug. 25	Nov. 15 Oct. 25	3.00 3.00	27.50 27.50
ASF	Mrs. Wm. Thaw, Jr. Yellow	Tall	Sept. 10	Nov. 10	3.00	27.50
X	Oak Leaf. Dark bronze	Med.	Sept. 30	Nov. 25	3.00	27.50
	Oconto. White	Med.	Aug. 25	Oct. 15	3.00	27.50
X	October Rose. Pink	Med.	Sept. 5	Oct. 20	3.00	27.50
	Old Rose. Pink	Med.	Sept. 10	Nov. 1	3.00	27.50
VD	Orchid Queen. Orchid pink	Meď.	Ter. Bud	Nov. 10	6.00	50.00
XP	Peter John. Light pink. Sport from Thanks-	Chaut	Sant 15	Nov. 25	3.00	27.50
YC	giving Pink Pink Chief. Pink	Short Tall	Sept. 15 Ter. Bud	Oct. 15	3.00	27.50
73	Pink Dawn. Light pink	Med.	Sept. 10	Oct. 25	5.00	40.00
	Pink Delight. Rose pink	Tall	Sept. 10	Nov. 1	3.00	27.50
	Pink Treasure. Pink	Short	Sept. 20	Nov. 10	3.00	27.50
XP	Quaker Maid. White	Med.	Aug. 25	Oct. 5	3.00	27.50
	R. B. Mellon. Light bronze	Tall	Sept. 1	Nov. 1	3.00	27.50
	Richmond. Yellow	Med.	Aug. 25	Nov. 1	3.00	27.50
P	R. M. Calkins. Golden yellow	Short	Sept. 20 Sept. 20	Nov. 30 Nov. 25	3.00 3.00	27.50 27.50
P	Rose Chochard. Pink	Short	Aug. 15	Oct. 20	3.00	27.50
	Rose Glory. Pink.	Med.	Ter. Bud	Oct. 20	3.00	27.50
	Rose Marie. Pink	Tall	Aug. 5	Oct. 1	3.00	27.50
	Rose Perfection. Pink	Short	Sept. 10	Nov. 10	3.00	27.50
P	Secretary Nehrling. Buff yellow	Med.	Sept. 15	Nov. 20	3.00	27.50
vc	Silver Dawn. White	Med.	Aug. 25	Oct. 20	3.00	27.50
XS	Silver Sheen. Standard early white	Med. Tall	Aug. 30	Oct. 20 Oct. 5	3.00 3.00	27.50 27.50
ΥP	Smith's Late White. White.		Aug. 10 Sept. 30	Dec. 15	3.00	27.50
	Smith's Superlative. Golden yellow		Aug. 25	Oct. 25	3.00	27.50
	Snow White. White		Ter. Bud	Nov. I	3.00	27.50
	Stately White. White	Tall	Ter. Bud	Nov. 1	3.00	27.50
		Med.	Aug. 25	Oct. 25	3.00	27.50
ΧP	Sun Gold. Yellow	Med.	Sept. 30	Nov. 25	3.00	27.50
P	Tekonsha. Bronze Thanksgiving Pink. Dark pink	Med. Short	Sept. 10 Sept. 15	Nov. 25 Nov. 25	3.00 3.00	27.50
Г	Timothy Eaton. White		Sept. 15	Nov. 20	3.00	27.50 27.50
	Tints of Gold. Bronze.	Med.	Aug. 15	Oct. 10	3.00	27.50
XP	Tobin's Late Yellow. Yellow. Sport from Smith's		J. J.			
	Late White	Short	Sept. 30	Dec. 15	3.00	27.50
X	Tobin's Late Yellow, Imp. Deep yellow. Sport	C1 .	6 . 36	D 15		
	from Tobin's Late Yellow	Short	Sept. 30	Dec. 15	8.00	75.00
D	Tom Browne. White	Med.	Ter. Bud Ter. Bud	Nov. 20 Oct. 20	3.00 3.00	27.50 27.50
	White Chieftain. White		Aug. 30	Nov. 1	3.00	27.50
7.0			Ter. Bud	Nov. 25	3.00	27.50
P	White Frick. White. Sport from Helen Frick		Sept. 10	Nov. 25	3.00	27.50
	White Seidewitz. White	Tall	Sept. 15	Nov. 30	3.00	27.50
	White Treasure. White, slight pink shading	Tall	Oct. 15	Dec. 15	7.00	65.00
v	Whittier. Yellow	Med.	Sept. 15	Nov. 15	3.00	27.50
X	William Didden. Yellow. Sport from Indianola		Aug. 25	Oct. 10	3.00	27.50
Y	Windsor Gold. Deep golden yellow	Med.	Ter. Bud	Nov. 1	4.00	35.00
^	bassador	Med.	Ter. Bud	Oct. 20	3.00	27.50
	Yellow Chattanooga. Light yellow	Med.	Sept. 20	Nov. 25	3.00	27.50
	Yellow Chieftain. Yellow	Short	Aug. 30	Nov. 1	4.00	35.00
	Yellow December Glory. Light yellow	Med.	Sept. 30	Dec. 1	3.00	27.50
	Yellow Frost. Yellow	Short	Early	Early	3.00	27.50
v	Yellow Gold. Bright golden yellow	Tall	Ter. Bud	Nov. 10	3.00	27.50
	Yellow Mefo. Yellow. Sport from Mefo	Med.	Sept. 20	Nov. 20	3.00	27.50
	ment	Med.	Sept. 10	Nov. 15	3.00	27.50
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New Varieties Are Increasing The Value Of Mums Annually

Exhibition Varieties

NOTE CAREFULLY INSTRUCTIONS FOR ORDERING ON PAGE TWO

	Name and Description	Height	Select Bud	Matures	Prie	ce per 1000
X	Alice Benson. White	Med.	Aug. 30	Nov. 1		\$75.00
X	Golden Majestic. Bright yellow	Tall Short	Aug. 25 Aug. 20	Nov. 1 Nov. 1	8.00 8.00	75.00 75.00
××	Harvest Moon. Bright yellow. J. R. Booth. Yellow. La France. Purple. Louisa Pockett. White. Majestic. Clear, shiny amber bronze. Marian H. Uffinger. Bronzy crimson with a	Tall Short Med. Med. Med. Short	Aug. 25 Ter. Bud Aug. 15 Aug. 15 Aug. 15 Aug. 20	Oct. 20 Oct. 25 1 Nov. 1 Nov. 1 Nov. 10 Nov. 1	6.00 0.00 per 8.00 6.00 8.00 8.00	50.00 doz. 75.00 50.00 75.00 75.00
^	gold reverse	Med.	Aug. 20	Nov. 1	8.00	75.00
X X X X X X	Turner Yellow. Yellow	Med. Short Med. Med. Short Med. Med. Med. Med. Med.	Aug. 20 Aug. 25 Aug. 25 Aug. 15 Sept. 5 Aug. 25 Aug. 25 Aug. 25 Aug. 25 Aug. 25	Nov. 1 Nov. 1 Nov. 1 Nov. 5 Nov. 1 Nov. 5 Nov. 5 Nov. 5 Nov. 5 Nov. 5	8.00 8.00 8.00 8.00 8.00 8.00 6.00 6.00	75.00 75.00 75.00 75.00 75.00 75.00 50.00 50.00 50.00
X	Vermont. Pink W. H. Waite. Bronze. W. H. Waite, Imp. Red Yellow Pockett. Yellow.	Tall Short Short Med.		Nov. 10 Nov. 5 Nov. 5 Nov. 10	8.00 6.00 6.00 8.00	75.00 50.00 50.00 75.00

Pompons & Decorative Commercial Varieties

The term Pompon is applied to those varieties which are of the true rounded type, and those very nearly approaching this type.

Decorative varieties are those which are a distinct departure from the rounded type. Their flowers are less compact, partly reflexed and display more of the color of the inner side of the petals.

Size of flower is indicated by S—small; Int.—intermediate; L—large.

- X—Extra good or generally accepted best varieties.
- S-Indicates varieties we find most suitable for shading.
- P-Indicates varieties suitable for Pot Plants.
- D—Indicates smaller flowered varieties most suitable for growing as disbudded pompons.
- Two letters mean, besides being extra good, variety is recommended for Pots or Shading.

NOTE CAREFULLY INSTRUCTIONS FOR ORDERING ON PAGE TWO

				Pr	ice per
Name and Description	Height	Type			1000
Acto. Rose pink	Med.	L. Pomp.	Nov. 1	\$3.00	\$27.50
Adelaide. Mahogany	Med.	S. Pomp.	Oct. 15	3.00	27.50
Agate. Yellow with red eye	Short	S. Pomp.	Oct. 25	3.00	27.50
Alecia. Bronze	Med.	S. Pomp.	Oct. 30	3.00	27.50
Alice. Pink	Med.	Int. Dec.	Nov. 15	3.00	27.50
Amaranthea. Purplish crimson	Med.	Int. Pomp.	Dec. 10	7.00	65.00
Angello. Light pink	Short	L. Pomp.	Oct. 25	3.00	27.50
	Acto. Rose pink. Adelaide. Mahogany Agate. Yellow with red eye. Alecia. Bronze Alice. Pink Amaranthea. Purplish crimson.	Acto. Rose pink	Acto. Rose pink	Acto. Rose pink	Name and Description Acto. Rose pink

A Few Exhibition Varieties Well Grown Will Be An Attraction

					Pric	e per
	Name and Description	Height	Туре	Matures	100	1000
XS	Arcadia. Finest pure white	Med.	Int. Pomp.	Oct. 25	4.00	35.00
	Avalon. Orange bronze		Int. Dec.	Nov. 25	3.00	27.50
P	Baby. Yellow	Short	S. Pomp.	Nov. 10	3.00	27.50
PD	Ball of Gold. Yellow	Med.	Int. Pomp.	Nov. 20	3.00	27.50
	Betty Price. Brilliant orange bronze	Med.	S. Pomp.	Nov. 25	3.00	27.50
	Betty Watkins. Bronzy yellow	Med.	Int. Pomp.	Nov. 25	3.00	27.50
X		Med.	S. Pomp.	Nov. 25	3.00	27.50
X	Big Baby. Yellow	Med.	S. Pomp.	Nov. 25	3.00	27.50
	Bobbie. Large creamy white		S. Pomp.	Nov. 20	3.00	27.50
ХP	Bonnibell. Orange buff	Short	S. Pomp.	Oct. 15	3.00	27.50
	Bonnie Maid. Pink	Med.	Int. Pomp.	Oct. 20	3.00	27.50 27.50
c	Bridal Bells. White	Med. Med.	Int. Dec.	Dec. 15 Oct. 25	3.00 6.00	50.00
S	Bright Spot. Shell pink. Bright center	Med.	S. Pomp. Int. Pomp.	Nov. 25	3.00	27.50
X	Bronze Beauty. Bronze		Int. Pomp.	Nov. 25	3.00	27.50
^	Bronze Doty. Bronze	Med. Med.	Int. Pomp.	Nov. 1	3.00	27.50
	Bronze Ermalinda. Dark bronze	Med.	S. Pomp.	Oct. 25	3.00	27.50
S	Bronze Queen. Dark bronze	Tall	S. Pomp.	Oct. 25	3.00	27.50
	Buttercup. Yellow	Tall	Int. Pomp.	Dec. 5	3.00	27.50
x		Tall	Int. Dec.	Nov. 20	3.00	27.50
Ď	• • • • • • • • • • • • • • • • • • • •	Med.	L. Dec.	Nov. 25	4.00	35.00
	Capt. Cook. Pink	Tall	Int. Pomp.	Oct. 20	3.00	27.50
	Carlina Lee. Dark rich red	Med.	Int. Dec.	Oct. 20	5.00	40.00
	Catherine. Bronze	Med.	Int. Dec.	Nov. 20	3.00	27.50
	Cavalcade. Mandarin red; golden bronze re-					
	verse	Med.	Int. Pomp.	Dec. 10	8.00	75.00
X	Chicago Pearl. Finest clear white	Med.	Int. Pomp.	Nov. 15	3.00	27.50
	Christmas Cheer. Deep yellow		Int. Pomp.	Dec. 15	3.00	27.50
X	Christmas Gold. Bright yellow		S. Pomp.	Dec. 1	3.00	27.50
	Clara Jameson, Imp. Bronze		S. Pomp.	Oct. 15	3.00	27.50
X	Clare. White		S. Pomp.	Nov. 15	3.00	27.50
v	Cora Peck Buhl. Yellow		Int. Pomp.	Oct. 25	3.00	27.50
X	Cordova. White		Int. Dec.	Nov. 25	3.00	27.50
	Creole. Bronze	Tall	Int. Pomp.	Nov. 5	3.00 3.00	27.50 27.50
D	Crystal White	Tall Tall	S. Pomp. Int. Pomp.	Nov. 20 Nov. 10	3.00	27.50
X		Med.	S. Pomp.	Nov. 1	3.00	27.50
P	Dark Pink Jewell. Dark Pink. Sport from Jewell		S. Pomp.	Oct. 15	4.00	35.00
_	December Glory. White		Int. Dec.	Dec. 5	3.00	27.50
-	Derigold. Lemon yellow		Int. Pomp.	Nov. 10	6.00	50.00
	Dorothy Nehrling. Deep rose pink		S. Pomp.	Nov. 15	3.00	27.50
	Dorothy Turner. Bronze		Int. Pomp.	Nov. 25	3.00	27.50
	Dream. Large semi-double pink	Med.	Int. Dec.	Nov. 20	3.00	27.50
	Dusky Maid. Rich red and gold	Tall	Int. Pomp.	Nov. 25		100.00
	Earliwhite. White		Int. Pomp.	Oct.10	3.00	27.50
	Ecstasy. Clear pink	Tall	Int. Pomp.	Oct. 25	3.00	27.50
XD	,	Tall	L. Dec.	Nov. 5_	3.00	27.50
	Elizabeth Peterson. Orange bronze		Int. Dec.	Oct. 25	4.00	35.00
VCD	Elletra. Pure even bronze	Med.	Int. Pomp.	Dec. 1	7.00	65.00
XSD	,	Tall	L. Pomp.	Nov. 1	3.00	27.50
Р	Ermalinda. Old rose		S. Pomp.	Oct. 25	3.00	27.50 27.50
	Ethel. Bronze	Med. Med.	S. Pomp. S. Pomp.	Oct. 25 Nov. 10	3.00 3.00	27.50 27.50
D	Fire Ball. Bright crimson	Mea. Tall	L. Pomp.	Nov. 10	3.00	27.50
Š	Fire Bird. Red bronze		Int. Dec.	Oct. 25	3.00	27.50
X		Med. Med.	Int. Pomp.	Nov. 25	3.00	27.50
XD		Med. Med.	Int. Pomp.	Dec. 1	3.00	27.50
	Gold Drop. Old gold		Int. Pomp.	Nov. 1	3.00	27.50
XS	Gold Finch. Yellow	Med.	Int. Pomp.	Oct. 20	3.00	27.50
P	Gold Mine. Yellow		S. Pomp.	Nov. 1	3.00	27.50
X			Int. Dec.	Nov. 25	3.00	27.50
	Golden Climax. Yellow		Int. Pomp.	Nov. 15	3.00	27.50
			·			

We Can't Accept Orders For Less Than 10 Of A Kind

					Pric	e per
	Name and Description	Height	Туре	Matures	100	1000
	Golden Fairy. Yellow		L. Pomp.	Oct. 25	5.00	40.00
	Golden Fleece. Yellow		L. Dec.	Nov. 25	3.00	27.50
XPD	Golden Herald. Large extra deep golden yellow	Med.	L. Dec.	Oct. 20	3.00	27.50
	Golden Modena. Deep golden yellow. Sport from Modena	Meď.	Int. Pomp.	Nov. 30	9 00	75.00
	Golden Nymph. Bronze, with reverse of petals	Med.	mit. Fomp.	1404. 50	8.00	75.00
	gold	Med.	S. Pomp.	Dec. 10	3.00	27.50
	Golden Sceptre. Yellow	Tall	Int. Pomp.	Nov. 25	3.00	27.50
	Golden Splendor. Bright yellow		Int. Pomp.	Nov. 5	3.00	27.50
S		Med.	Int. Pomp.	Oct. 15	3.00	27.50
	Golden Varsity. Yellow. Sport from Varsity, deeper shade	Chart	S. Pomp.	Na. 10	2.00	27.50
P	Governor Lake. Reddish bronze		Int. Pomp.	Nov. 10 Nov. 25	3.00 3.00	27.50 27.50
•	Grenadier. Red		Int. Pomp.	Nov. 10	3.00	27.50
, ,	Greta. White		Int. Pomp.	Oct. 20	3.00	27.50
	Harmony. Red orange, with soft bronze shading	Med.	Int. Pomp.	Dec. 1	8.00	75.00
	Hasegawa Gold. Large golden yellow		Int. Pomp.	Dec. 1	3.00	27.50
	Hasegawa Orange. Deep buff with orange cast		Int. Dec.	Nov. 10	4.00	35.00
	Helen Hubbard. Red		L. Dec.	Nov. 25	3.00	27.50
VCD	Ida, Imp. Yellow		Int. Pomp.	Oct. 15	3.00	27.50
XSP	Irene Rich. Pink		S. Pomp. L. Pomp.	Oct. 15 Nov. 1	3.00 3.00	27.50 27.50
XS	Jemima. Bronze		Int. Pomp.	Oct. 30	3.00	27.50
XSP	Jewell. Bright rose pink		S. Pomp.	Oct. 10	3.00	27.50
	Jessie. Deep rose pink; excellent		Int. Pomp.	Oct. 25	4.00	35.00
	Joan Wells. Bronze. Sport from Pink Dot		Int. Pomp.	Oct. 25	3.00	27.50
,	Katherine Johnston. Orange		Int. Pomp.	Dec. 10	7.00	65.00
	La Vera. Pink		Int. Pomp.	Nov. 1	3.00	27.50
X	Legal Tender. Bronze and gold		Int. Dec.	Nov. 20	3.00	27.50
-	Leileh. Rose pink		Int. Dec. Int. Pomp.	Oct. 15	3.00	27.50
	Letitia. White with pink center		Int. Pomp.	Oct. 15 Oct. 15	3.00 3.00	27.50 27.50
XD	Lillian Doty. Shell pink	Med.	L. Pomp.	Nov. 1	3.00	27.50
XP	Lois. Golden yellow		S. Pomp.	Nov. 15	3.00	27.50
	Long Island Sunshine. Bright yellow		Int. Pomp.	Nov. 30	3.00	27.50
	Loris. Bronze	Med.	Int. Dec.	Dec. 1	4.00	35.00
	Los Angeles. Clear scarlet		Int. Dec.	Nov. 15	4.00	35.00
	Lucinda. Deep pink		Int. Pomp.	Nov. 15	3.00	27.50
	Madeline. True pink. Sport from Pink Dot		Int. Pomp. Int. Dec.	Oct. 25	4.00 6.00	35.00 50.00
D	Marianna. White		L. Pomp.	Nov. 10 Nov. 1	3.00	27.50
	Martello. White		S. Pomp.	Dec. 5	7.00	65.00
XSD	Mary Lennon Hall. Clear rich yellow		Int. Pomp.	Nov. 1	3.00	27.50
XP	Mary Pickford. White		S. Pomp.	Nov. 1	3.00	27.50
D	Masaka. Yellow		L. Pomp.	Oct. 20	3.00	27.50
Ď	Masterpiece. Tourmaline pink		Int. Pomp.	Nov. 15	3.00	27.50
S	Minong. White		S. Pomp. Int. Pomp.	Oct. 20	3.00 3.00	27.50 27.50
P	Mrs. Beu. Standard bronze		Int. Pomp.	Dec. 1 Nov. 25	3.00	27.50 27.50
	Mrs. Mary Hooker. Red.		L. Dec.	Nov. 15	3.00	27.50
		Tall	Int. Pomp.	Nov. 10	4.00	35.00
	Mrs. N. G. Moore. White. Sport from Olivia		Int. Pomp.	Dec. 1	3.00	27.50
	Muskoka. Bronze		L. Pomp.	Nov. 10	3.00	27.50
	Nellie Kleris. Lavender pink		L. Pomp.	Oct. 25	3.00	27.50
	New York. Bronze. Oranga bronze		S. Pomp.	Nov. 15	3.00 3.00	27.50 27.50
AP	November Bronze. Orange bronze		Int. Pomp. Int. Pomp.	Nov. 15 Oct. 15	3.00	27.50 27.50
XSP			S. Pomp.	Oct. 15	3.00	27.50
,,,,,,	October Snow. Pure white		S. Pomp.	Oct. 15	7.00	65.00
X	Olivia. Pink		Int. Pomp.	Dec. 1	3.00	27.50
	Ottawa. Orange bronze	Med.	S. Pomp.	Nov. 25	5.00	40.00
X	Pagosa. Dark pink	Med.	Int. Pomp.	Dec. 5	3.00	27.50

Our Canadian Buyers Must Get A Permit From Ottawa

			_			ce per
	Name and Description	Height	Туре	Matures	100	1000
	Pasadena. Vivid bronzy orange	Med.	Int. Dec.	Nov. 1	4.00	35.00
ΧP	Patsy Dowd. Red		S. Pomp.	Nov. 5	3.00	27.50
	Pauline Wilcox. Bronze		L. Dec.	Nov. 5	3.00	27.50
	Peggy Poesch. Brilliant apricot		L. Dec.	Nov. 10	8.00 4.00	75.00 35.00
	Perfecto. Yellow	Med. Med.	S. Pomp. Int. Pomp.	Nov. 10 Nov. 25	5.00	40.00
P	Persian Rose. Rose pink	Short	Int. Pomp.	Oct. 20	4.00	35.00
	Pink Dot. White, with pink center; very ex-	511011		001. 20		
		Med.	Int. Pomp.	Oct. 25	3.00	27.50
	Pink Lassie. Pink with lavender shading	Med.	Int. Pomp.	Nov. 20	8.00	75.00
	Pink Pearl. Pink	Med.	S. Pomp.	Oct. 20	8.00	75.00
	Pink Popcorn. Pink	Med.	Int. Dec.	Oct. 30	3.00	27.50
VCD	Princeton Colden valley sufficed with arms		Int. Pomp.	Nov. 10	12.00 3.00	100.00 27.50
A3P	Princeton. Golden yellow suffused with orange Red Beu. Reddish bronze	Mea. Short	Int. Pomp. Int. Dec.	Nov. 15 Nov. 25	3.00	27.50
	Red Princeton. Reddish bronze	Med.	Int. Pomp.	Nov. 15	8.00	75.00
XS	Rev. Horace Bushnell. White	Tall	Int. Pomp.	Nov. 10	4.00	35.00
	Rising Sun. Pink	Med.	Int. Pomp.	Oct. 25	8.00	75.00
XS	Robin Hood. Rich deep red	Med.	S. Pomp.	Nov. 1	3.00	27.50
XSP	Rodell, Imp. Yellow. Sport from Rodell; ex-					
VC	cellent	Short	Int. Pomp.	Oct. 20	3.00	27.50
	Roman Bronze. Bronze. Sport from Capt. Cook		Int. Pomp.	Oct. 20	3.00	27.50
	Rose Charm. Rose pinks	Med. Med.	L. Pomp. Int. Pomp.	Nov. 1 Dec. 1	3.00 3.00	27.50 27.50
^	Rowenna. Bronze	Tall	Int. Pomp.	Nov. 25		27.50
	Royal Crimson. Intensely rich crimson	Med.	L. Dec.	Dec. 1	8.00	75.00
	Royal Queen. White	Med.	Int. Pomp.	Dec. 5	3.00	27.50
	Royal Queen. White	Med.	L. Dec.	Nov. 15	7.00	65.00
	Sarda. Deep pink. Sport from Pink Dot	Med.	Int. Pomp.	Oct. 25	3.00	27.50
XSD	Sea Gull. White	Tall	Int. Pomp.	Nov. 1	3.00	27.50
CD	Sheila. Clear pink		Int. Pomp.	Oct. 20	1,2.00	100.00
	Silver Ball. White	Med. Med.	L. Pomp. S. Pomp.	Oct. 15 Oct. 15	3.00 3.00	27.50 27.50
	Silver Star. White	Tall	Int. Pomp.	Dec. 5	3.00	27.50
	Silver Tips. Bright pink with silver tips	Med.	Int. Pomp.	Nov. 10	3.00	27.50
	Snow Cloud. White	Med.	Int. Pomp.	Oct. 15	3.00	27.50
S	Source D'Or. Bronze	Med.	Int. Dec.	Nov. 1.	3.00	27.50
	St. Louis Gold. Deep golden yellow. Sport from					
	Dorothy Turner	Med.	Int. Pomp.	Nov. 25	3.00	27.50
	Suntan. Bronze	Med.	Int. Dec.	Oct. 25	3.00	27.50
X	Thyra. Dark pink	Med. Med.	L. Pomp. S. Dec.	Nov. 1 Dec. 1	3.00 3.00	27.50 27.50
x	Tom Pearson. Deep yellow	Med.	Int. Pomp.	Nov. 15	3.00	27.50
	Tonquin. Rose color	Med.	Int. Pomp.	Dec. 10	3.00	27.50
D	Touchdown. White with yellow cast at center	Med.	Int. Pomp.	Oct. 25	3.00	27.50
D	Unalga. Yellow	Med.	Int. Pomp.	Nov. 25	3.00	27.50
X	Usona. Pink	Med.	Int. Pomp.	Nov. 25	3.00	27.50
VD	Uvalda. Creamy white	Med.	Int. Pomp.	Oct. 10	3.00	27.50
ΧD	Vera Victoria. Golden yellow	Tall	Int. Pomp.	Nov. 1	3.00	27.50
XSD	Western Beauty. Pink	Short	Int. Dec. L. Pomp.	Nov. 20 Nov. 1	3.00 3.00	27.50 27.50
XSP	White Jewell. White suffused with pink	Short	S. Pomp.	Oct. 10		27.50
	White Light. Creamy white changing to pure	311011	3. i omp.		5.00	_,,,,
	white	Med.	Int. Pomp.	Nov. 15	7.00	65.00
	White Tonquin. Pure white. Sport from					
	Tonquin	Med.	Int. Pomp.	Dec. 10	7.00	65.00
	Wildfire. Orange rust	Med.	Int. Dec.	Dec. 1	4.00	35.00
Y	Yellow Bird. Yellow	Med. Med.	Int. Pomp. Int. Dec.	Nov. 20 Nov. 25	3.00 4.00	27.50 35.00
^	Yellow Dainty Maid. Yellow. Sport from Cordova	med.	iiii. Dec.	14UV, ZJ. 1	7.00	33.00
		Med.	S. Pomp.	Nov. 1	4.00	35.00
XS	Yellow Dot. (Jablonsky.) Yellow; reddish center		Int. Pomp.	Oct. 25	3.00	27.50
			•			

If Your Express Differs From Your Post Office, Tell Us

	78 1 15g				Pri	Price per	
	Name and Description	Height	Туре	Matures	100	1000	
D	Yellow Doty. Yellow	Med.	L. Pomp.	Nov. 1	3.00	27.50	
XSP	Yellow Fellow. Yellow	Med.	Int. Dec.	Nov. 15	3.00	27.50	
	Yellow New York. Yellow		S. Pomp.	Nov. 15	3.00	27.50	
	Yellow Sea Gull. Yellow. Sport from Sea Gull			Nov. 1	4.00	35.00	
	Yellow Silver Star. Yellow. Sport from Silver Star		•	Dec. 10	3.00	27.50	
	Yuletide White. White			Dec. 1	3.00	27.50	
	Yuletide Yellow. Yellow			Dec. 1	3.00	27.50	
XPD	Yuvawn, Yellow		•		3.00	27.50	
	Zoe. Golden bronze	Med.	Int. Pomp.	Nov. 20	3.00	.27.50	

Anemone Flowered Varieties

- X—Extra good or generally accepted best varieties.
- P-Indicates varieties suitable for Pot Plants.
- D—Indicates smaller flowered varieties most suitable for growing as disbudded pompons.
- Two letters mean, besides being extra good, variety is recommended for Pots or Shading.

NOTE CAREFULLY	INSTRUCTIONS	FOR ORDERING	ON P	AGE T	WO
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Price per

					Pri	ce per
	Name and Description	Height	Size	Matures	100	1000
XPD	Beautiful Lady. Bright pink petals with creamy					
XI D		Short	Large	Nov. 20	\$3.00	\$27.50
VD	white cushion		Large		•	
	Betty Rose. Pink, both petals and cushion	Med.	Large	Oct. 25	3.00	27.50
XSD	Blanche. White	Med.	Med.	Oct. 30	3.00	27.50
XD	Bronze Norma. Bronze. Sport from Norma	Tall	Large	Nov. 20	3.00	27.50
PD	Bronze Supreme. Bronze with pink cast	Tall	Large	Nov. 30	5.00	40.00
D	Bronze Tuxedo. Bronze. Sport from Tuxedo	Med.	Large	Nov. 10	4.00	35.00
X						
		Med.	Small	Nov. 25	3.00	27.50
-	Volunteer				3.00	
	Captivation. Mahogany red	Med.	Large	Nov.10		27.50
	China Rose. Dragon's blood red	Med.	Large	Nov.10	3.00	27.50
X	Chrome Emerald. Golden orange with gold					
	cushion	Short	Med.	Nov. 25	3.00	27.50
D	Citrus Queen. Lemon orange	Med.	Large	Nov. 25	3.00	27.50
	Coral Blaze. Orange bronze	Short	Large	Nov. 25	3.00	27.50
	Crimson Glow. Crimson maroon	Med.	Med.	Nov. 25	3.00	27.50
N. D	Dark Pink Norma. Dark pink	Tall	Large	Nov. 20	3.00	27.50
				Nov. 25	3.00	27.50
X		Short	Med.			
D	Elsa Piel. Orchid pink, cushion tinged with gold	Med.	Large	Nov. 10	8.00	75.00
XD	Espy's Dark Pink Supreme. Sport from Pink					
	Supreme	Tall	Large	Nov. 30	3.00	27.50
D	Espy's Pink Ruffled. Pink	Tall	Large	Nov. 30	8.00	75.00
	Espy's White Supreme. Excellent white	Tall	Large	Nov. 30	4.00	35.00
	Estrelita. Bronze throughout, with a full regu-		J			
712	lar cushion	Med.	Large	Nov. 20	3.00	27.50
	Faith Engel. Yellow, with golden yellow cushion	Med.	Small	Nov. 15	8.00	75.00
VPD		Med.	Large	Nov. 15	3.00	27.50
	Freida. Pink; choice			Dec. 15	3.00	27.50
	Garza Supreme. Standard white	Short	Med.			
_	Graceland. Pure white, with yellow center	Short	Med.	Oct. 25	3.00	27.50
D	Helios. Yellow	Med.	Large	Nov. 10	8.00	75.00
P	Hope Engel. Rich bronze	Med.	Small	Nov. 25	8.00	75.00
PD	Izola Amaranth	Med.	Small	Nov. 1	3.00	27.50
D	John Shields. Yellow	Med.	Large	Nov. 10	3.00	27.50
PD	Laelia. Rose pink	Short	Meď.	Nov. 1	3.00	27.50
PD	Little America. Snow white; medium size	Med.	Med.	Nov. 5	4.00	35.00
_	Long Island Beauty. White with large yellow					
FD	cushion	Med.	Large	Nov. 20	4.00	35.00
VDB		med.	Luige	1404. 20	1.00	33.00
XPD	Margo. Pinkish violet outer petals, with high,	Cl 4	Con all	Nov 5	3.00	27 50
	round, yellow cushion	Short	Small	Nov. 5	3.00	27.50

Some Of The Latest Anemones Are Highly Attractive

Anemone Flowered Varieties (Continued)

					Pric	e per
	Name and Description	Height	Size	Matures	100	1000
D D	Marietta. Soft pink with very full cushion Maritza. Bright yellow with full highly rounded	Med.	Large	Oct. 20	3.00	27.50
	Cushion	Short	Large	Nov. 25	3.00	27.50
	cushion	Tall	Med.	Nov. 20	3.00	27.50
PD	Noveltie. White throughout, with large cushion	Short	Med.	Nov. 10	3.00	27.50
	Orchid Beauty. Orchid with golden cushion		· Med.	Nov. 15	3.00	27.50
	Pink Lady. Pink petals with light pink cushion		Med.	Nov. 15	3.00	27.50
	Red Rolinda. Red. Sport from Rolinda		Med.	Nov. 20	3.00	27.50
	Rolinda. Orange bronze		Med.	Nov. 20	3.00	27.50
	Smith's Innocence. White	Tall	Large	Nov. 5	3.00	27.50
D	Stoplight. Terra cotta petals with low yellow					
	cushion	Med.	Med.	Nov. 5	3.00	27.50
	Sunray. Yellow		Small	Nov. 15	3.00	27.50
	Sunshine. Yellow	Short	Med.	Nov. 25	3.00	27.50
	Susanne Miller. Yellow. Sport from Norma		Large	Nov. 20	3.00	27.50
	The Belle. Pure white	Med.	Med.	Nov. 5	3.00	27.50
XD	The Titan. Scarlet crimson with bronzy red					
_	_ cushion	Med.	Large	Nov. 5	3.00	27.50
D	Topknot. Creamy white cushion, rosy pink				2.00	
***	petals		Med.	Nov. 5	3.00	27.50
	Tuxedo. Pink		Large	Nov. 10	3.00	27.50
	White Anemone. White		Med.	Nov. 1	3.00	27.50
	White Izola. White. Sport from Izola		Small	Nov. 1	3.00	27.50
	White Norma. White	Tall	Large	Nov. 20	3.00	27.50
	Yellow Blanche. Yellow. Sport from Blanche		Med.	Oct. 30	3.00	27.50
	Yellow Estrelita. Yellow. Sport from Estrelita		Large	Nov. 20	4.00	35.00
	Yellow Garza Supreme. Yellow	Short	Med.	Dec. 15	3.00	27.50
	Yellow Rolinda. Deep golden yellow. Sport from Rolinda	Med.	Med.	Nov. 20	3.00	27.50
D	Yellow Supreme. Yellow. Sport from Pink Su-					
	Yolanda. Yellow	Tall Med.	Large Small	Nov. 30 Nov. 25	4.00 4.00	35.00 35.00

Odd Formed--Feathery and Threadlike--Varieties

NOTE CAREFULLY INSTRUCTIONS FOR ORDERING ON PAGE TWO

		Select		Pri	ice per
Name and Description	Height	Bud	Matures	100	1000
Benten. Bronze and deep red tips with green					
center	Med.	Ter. Bud	Nov. 10	\$6.00	\$50.00
Japanese Maiden. Yellow	Med.	Ter. Bud	Nov. 25	6.00	50.00
Miss Gena Harwood. Rosy mauve	Med.	Ter. Bud	Nov. 5	6.00	50.00
Ohkwan. Yellow	Med.	Ter. Bud	Nov. 1	6.00	50.00
Patricia Grace. Shell pink	Med.	Ter. Bud	Nov. 5	6.00	50.00
Peggy Ann Hoover. Quilled lavender	Short	Ter. Bud	Nov. 5	6.00	50.00
Pride of Tokyo. Creamy pink. A novelty with					
odd tubular petals	Tall	Ter. Bud	Nov. 10	6.00	50.00
Rayonnante. Rose pink	Med.	Ter. Bud	Nov. 5	6.00	50.00
Sam Caswell. Bright rose	Med.	Ter. Bud	Nov. 1	6.00	50.00
The Dean. White	Med.	Ter. Bud	Nov. 1	6.00	50.00
Unique. Rich wine red	Tall	Ter. Bud	Dec. 1	6.00	50.00
Yellow Taggart. Yellow quilled petals covered					
with hair	Med.	Ter. Bud	Nov. 1	6.00	50.00
Yomei. Golden tube petals with red spoon-					
end tips	Med.	Ter. Bud	Nov. 10	6.00	50.00

Don't Order Varieties Not Listed In This Catalog. It Covers "All The Best"

Pot Plant Varieties

In addition to varieties listed here as essentially intended for pot plant culture, many of the varieties listed under Pompons are excellent as pot plants. Short and medium sorts should be used for this. A number of such varieties are denoted by the letter (P)

X—Extra good or generally accepted best varieties.

D-Indicates smaller flowered varieties most suitable for growing as disbudded pompons.

	NOTE CAREFULLY INSTRUCTIONS FO	OR ORD	ERING ON	PAGE TW	0 .	•
	Name and Description				Pr	ice per
~		_	Type	Matures	100	1000
	Autumn Glow. Bronze red		Int. Dec.	Nov. 1	\$3.00	\$27.50
XD			Int. Pomp.	Oct. 20	3.00	27.50
XD	Bright Light. Bright yellow		L. Dec.	Nov. 20	3.00	27.50
D	Bronze Prince. Bronze		L. Dec.	Nov. 1	3.00	27.50
D	Brutus. Bronze		Int. Dec.	Nov. 10	3.00	27.50
XD	Caprice Butler. Deep pink		Int. Dec.	Oct. 25	3.00	27.50
XD	Caprice Lilac. Deep lilac		Int. Dec.	Oct. 25	3.00	27.50
XD	Caprice Purple. Purple	Short	Int. Dec.	Oct. 25	3.00	27.50
D	Caprice White. White		Int. Dec.	Oct. 25	3.00	27.50
D	Caprice Yellow. Yellow		Int. Dec.	Oct. 25	3.00	27.50
XD	July 1 1 2 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Int. Anem.	Nov. 1	3.00	27.50
D	Greystone. Golden orange	Short	L. Pomp.	Nov. 10	3.00	27.50
XD	Kathleen Thompson. Bronze	Short	Int. Dec.	Oct. 25	3.00	27.50
XD	Ohio State. Yellow	Short	Int. Anem.	Nov. 1	3.00	27.50
P	Orchid Gem. Pink	Short	Int. Single	Oct. 25	4.00	35.00
D	Patty. Pink	Short	L. Pomp.	Nov. 25	3.00	27.50
D	Pink Beauty. Light pink	Short	L. Pomp.	Oct. 20	3.00	27.50
XD	Pygmy. Light pink	Short	Int. Pomp.	Nov. 10	3.00	27.50
D	Queen of Pinks. Pink Mandel	Short	L. Pomp.	Nov. 10	7.00	65.00
D	Richard Mandel. Pure white	Short	L. Pomp.	Nov. 10	7.00	65.00
PD	Rose Mandel. Deep lavender		L. Pomp.	Oct. 20	3.00	27.50
XD	Savanta. White, with tint of pink		L. Pomp.	Nov. 1	3.00	27.50
XD	Titian Beauty. Bronze		L. Anem.	Nov. 25	3.00	27.50
XD	W. H. Lincoln. Yellow		L. Pomp.	Nov. 25	3.00	27.50
\ D	Yellow Beauty. Mandel's bright golden yellow		L. Pomp.	Nov. 10	7.00	65.00

Single--Daisy Type--Varieties

- X—Extra good or generally accepted best varieties.
- S—Indicates varieties we find most suitable for shading.
- P—Indicates varieties suitable for Pot Plants.
- D—Indicates smaller flowered varieties most suitable for growing as disbudded pompons.

	NOTE CAREFULLY INSTRUCTIONS FO	OR ORD	ERING ON	PAGE TW	O Pri	ce per
	Name and Description	Height	Size	Matures	100	1000
	Absolute. Scarlet bronze with yellow center	Med.	Med.	Nov. 1	\$3.00	\$27.50
	Aloma. Terra cotta bronze with yellow center	Med.	Med.	Oct. 20	3.00	27.50
X	Buckingham Bronze. Bronze	Short	Med.	Nov. 5	3.00	27.50
X	Buckingham, W. H. Pink	Short	Med.	Nov. 5	3.00	27.50
	California Gold. Deep yellow	Med.	Med.	Nov. 15	7.00	65.00
	California Peach. Delicate pink	Med.	Med.	Oct. 25	7.00	65.00
XPI	Carnelia. Red	Short	Large	Nov. 30	3.00	27.50
	Charter Oak. Yellow	Tall	Med.	Nov. 25	3.00	27.50
1	Clara Holford. Warm red	Med.	Large	Nov. 10	8.00	75.00
	Dawn. (Hasegawa.) Chestnut bronze	Tall	Med.	Dec. 5	3.00	27.50
	D. Baker. Red	Short	Large	Oct. 20	3.00	27.50
E .	Elizabeth McDowell. Bronze		Med.	Nov. 15	3.00	27.50
	Fairy Queen. Intense orchid pink		Med.	Nov. 15	8.00	75.00
	Gladys Duckham. White	Med.	Med.	Nov. 20	3.00	27.50

Cold Houses, Described On Following Pages Make For Quality And Economy

Single--Daisy Type--Varieties (Continued)

					Pric	e per
	Name and Description	Height	Size	Matures	100	1000
X	Golden Mensa. Yellow	Med.	Med.	Nov. 10	3.00	27.50
XS	Gretchen Piper. Yellow	Med.	Med.	Oct. 25	3.00	27.50
	Hasegawa Pink. Pink with golden center	Med.	Med.	Nov. 20	3.00	27.50
X	Hasegawa Poinsettia. Poinsettia red	Med.	Med.	Nov. 25	3.00	27.50
P	Ida Skiff. Bronze	Short	Med.	Nov. 1	3.00	27.50
D	Jane. Yellow. Sport from Valencia	Tall	Large	Nov. 30	4.00	35.00
	Japanese Red. Venetian red with gold center	Med.	Med.	Nov. 1	4.00	35.00
D	Joan Piper. Amber bronze		Med.	Oct. 20	3.00	27.50
	Joe Beuerlein. Crimson red	Med.	Med.	Dec. 5	4.00	35.00
	Kramer's Buff Orange. Light bronze orange	Med.	Med.	Nov. 10	4.00	35.00
XS	Lighthouse. Bronze shading to watermelon red	Med.	Med.	Nov. 10	3.00	27.50
XD	Mason's Bronze. Burnt orange	Short	Large	Nov. 5	3.00	27.50
XPD	Melba. Reddish bronze	Short	Large	Nov. 5	3.00	27.50
	Miss Isabelle. Bronze	Tall	Med.	Nov. 25	3.00	27.50
	Mrs. A. Kramer. Clear solid pink	Med.	Med.	Nov. 5	4.00	35.00
	Mrs. Darling. Red	Med.	Med.	Nov. 1	3.00	27.50
	Mrs. E. D. Godfrey. Light pink	Tall	Med.	Nov. 25	3.00	27.50
	Radiant. Bright red	Med.	Med.	Nov. 10	3.00	27.50
XPD	Red Melba. Red	Short	Large	Nov. 5	3.00	27.50
XD	Red Rover. Crimson orange	Short	Large	Nov. 5	3.00	27.50
ΧP	Sunburst. Sunburst orange	Med.	Large	Nov. 25	3.00	27.50
XD	Sunny Boy. Yellow	Med.	Med.	Nov. 15	3.00	27.50
ΧP	Tagoya. Brilliant goya red	Short	Med.	Nov. 5	3.00	27.50
P	Thanksgiving Bronze. Dark bronze	Short	Med.	Nov. 25	3.00	27.50
XD	Valencia. Orchid pink	Tall	Large	Nov. 30	3.00	27.50
	White Godfrey. White	Tall	Med.	Nov. 25	3.00	27.50
	White Mensa. White		Med.	Nov. 10	3.00	27.50
X	Woburn. Pink		Med.	Nov. 15	3.00	27.50
	Yellow Godfrey. Yellow	Tall	Med.	Nov. 25	3.00	27.50

Hardy Varieties

- X—Extra good or generally accepted best varieties.
- S-Indicates varieties we find most suitable for shading.
- P-Indicates varieties suitable for Pot Plants.

NOTE CAREFULLY INSTRUCTIONS FOR ORDERING ON PAGE TWO

					Pr	ice per
	Name and Description	Height	Type	Matures	100	1000
X	A. Barham. Orange bronze	Short	Decorative	Oct. 1	\$3.00	\$27.50
X	Albert Muller. Apricot suffused with pink	Med.	Decorative	Oct. 1	3.00	27.50
X	Aladdin. Bronze	Short	Decorative	Sept.	3.00	27.50
ΧP	Amelia. (Pink Cushion.) Bright pink	Short	Decorative	Sept.	3.00	27.50
X	Barbara Cummings. Yellow shading to bronze	Med.	Decorative	Sept.	3.00	27.50
	Carrie. Yellow	Med.	Decorative	Early	3.00	27.50
XS	Cavalier. Rich vermillion-red	Med.	Single	Oct. 15	3.00	27.50
	Dazzler. Cardinal red	Med.	Single	Oct. 10	3.00	27.50
ΧP	Early Bronze. Bronze	Short	Button	Sept.	3.00	27.50
P	Early Yellow. Yellow. Sport from Early Bronze	Short	Button	Sept. 15	3.00	27.50
ΧP	Eden. Rose pink	Short	Decorative	Oct. 1	3.00	27.50
X	Francis Whittlesey. Rich bronze and garnet	Short	Decorative	Sept. 30	3.00	27.50
X	Ganna. Bright pink	Med.	Decorative	Oct. 12	3.00	27.50
P	Glada. Soft pink	Short	Decorative	Sept.	3.00	27.50
X	Granny Scovill. Warm coral bronze	Dwarf	Decorative	Oct. 15	3.00	27.50
	Gypsy Girl. Chestnut crimson	Short	Single	Early Oct.	3.00	27.50
X	Indian Summer. Bronze	Med.	Single	Oct. 25	3.00	27.50
	Jack Bannister. Light yellow		Decorative	Oct. 10	3.00	27.50
	Jean Cummings. White		Decorative	Sept.	3.00	27.50
X	Jean Treadway. Pink with dark center	Med.	Decorative	Oct. 1	3.00	27.50

Most Gardeners Are Interested in Hardy

Hardy Varieties (Continued)

					Pric	e per
	Name and Description	Height	Type	Matures	100	1000
XP	Judith Anderson. Yellow	Short	Button	Oct. 25	3.00	27.50
X	Lorelei. Yellow	Med.	Decorative	Sept. 10	3.00	27.50
	Margot. White	Short	Button	Oct. 8	3.00	27.50
X	Normandie. White	Short	Decorative	Sept.	3.00	27.50
	Provence. Soft pink blended with yellow	Med.	Decorative	Sept.	3.00	27.50
	Red Flare. Bright red	Med.	Button	Oct. 15	3.00	27.50
X	R. Marion Hatton. Canary yellow	Med.	Decorative	Oct. 1	3.00	27.50
X		Med.	Decorative	Oct. 15	3.00	27.50
X	Ruth Cummings. Reddish bronze	Med.	Decorative	Early Oct.	3.00	27.50
	Ruth Hatton. Ivory white	Short	Decorative	Oct. 10	3.00	27.50
	September Queen. White	Short	Decorative	Sept.	3.00	27.50
	Tasiva. White	Med.	Decorative	Sept.	3.00	27.50
	Vivid. Rosy crimson	Med.	Decorative	Oct. 1	3.00	27.50
	Wolverine. Yellow	Med.	Decorative	Sept.	3.00	27.50
	Yellow Gem. Canary yellow		Button	Oct. 5	3.00	27.50
X	Yellow Normandie. Yellow	Med.	Decorative	Early	3.00	27.50

Hardy Korean Varieties NOTE CAREFULLY INSTRUCTIONS FOR ORDERING ON PAGE TWO

				Pri	ice per
Name and Description	Height	Туре	Matures	100	1000
Agnes Selkirk Clark. Apricot salmon	Med.	Single	Sept. 25	\$4.00	\$35.00
Aphrodite. Blush pink	Short	Single	Oct. 15	3.00	27.50
Apollo. Bronze red	Med.	Single	Oct. 12	3.00	27.50
Ceres. Old gold	Med.	Single	Oct. 10	3.00	27.50
Country Girl. Pink	Tall	Single	Oct. 10	3.00	27.50
Daphne. Pink	Med.	Single	Oct. 12	3.00	27.50
Diana. Rose pink	Med.	Single	Oct. 12	3.00	27.50
Ember. Coral and orange bronze	Med.	Decorative	Oct. 15	4.00	35.00
Hebe. Lavender pink	Med.	Single	Oct. 15	3.00	27.50
Innocence. White	Short	Single	Sept.	3.00	27.50
King Midas. Yellow	Med.	Decorative	Sept. 30	4.00	35.00
Louise Schling. Bronze salmon	Med.	Single	Oct. 5	3.00	27.50
Mars. Wine-red	Med.	Single	Oct. 15	3.00	27.50
Mercury. Blend of old rose and salmon	Med.	Single	Sept. 30	3.00	27.50
Nancy Copeland. Red	Med.	Single	Sept. 25	4.00	35.00
Niobe. White with light yellow disc	Med.	Semi-	0-4-5	2.00	27 50
	A.A. 1	double	Oct. 5	3.00	27.50 27.50
Orion. Canary yellow	Med.	Single	Oct. 5	3.00 4.00	35.00
Pink Lustre. Orchid pink	Med.	Single	Sept. 25 Oct. 5	3.00	27.50
Romany. Reddish bronze	Med.	Decorative	Oct. 12	3.00	27.50
Saturn. Bronze	Med. Short	Single Decorative	Sept. 25	4.00	35.00
The Moor. Amaranth purple	Med.	Semi-	Sept. 27	4.00	33.00
The Urchin. Crushed raspberry and gold	med.	double	Oct. 10	4.00	35.00
Venus. Pink	Med.	Single	Oct. 12	3.00	27.50
Vulcan. Bronze crimson.	Med.	Single	Oct. 5	3.00	27.50
V WICCHI. DIONZE CIMISON	Micu.	Jingle	JC(,)	3.00	

Japanese Mountain or Cascade Varieties

P—Indicates varieties suitable for Pot Plants.

NOTE CAREFULLY INSTRUCTIONS FOR ORDERING ON PAGE TWO

				Pr	ice per
	Name and Description	Height	Matures	100	1000
	Agappina. Mahogany with tinge of yellow on the tips the cushion florets	of Med	Nov 10	\$6.00	\$50.00
P	Anna. Pure white single	Short	Oct. 30	6.00	50.00
	Brown Button. Bronze	Med.	Nov. 10	6.00 6.00	50.00 50.00

Mums. Check Flowering Dates Hardy Page



Pure White "Betsy Ross" one of the finest for second Early, either shaded or grown natural.

CULTURAL NOTES

Geo. J. Ball

Lack of space makes it necessary to confine these notes to a few important fundamentals. But let us digress long enuf tho to say that in no country in the world does Chrysanthemum culture and improvement approach the accomplishments of our enthusiastic American growers. But,—we frequently meet with cultural failures.

We find that the type of soil is rather important in that varying types call for different management. Quite light or sandy material seems to produce as good results as a clay soil. This is demonstrated by pure sand culture that produces excellent results. However, with ordinary soil methods, a light or sandy material should have humus added to it freely in the form of decayed or straw manure. This gives body and fertility to such soil. Very heavy soil, on the other hand, needs the same material to open it up for freer air and root penetration that assures the ALL IMPOR-TANT good root action which, of course, applies to any of our greenhouse crops. In preparing fresh soil, it is much better to compost it outdoors a year or two in advance. If such isn't available, it would be safe to suggest adding manure to fresh soil at the rate of 1 part manure to 3 or 4 parts of soil, depending on how strawy or well decayed it is; and after this is leveled in the bed, add acid phosphate, 20% grade, at the rate of 10 lbs. per 100 sq. ft. of bed. We should add nothing further to such a preparation until high summer temperatures are past and growth is stimulated by cooler weather. At this reviving stage and about 2-3 weeks apart, we top-dress with a balanced fertilizer, 5.15.5, about 2 lbs. to 100 sq. ft. Be sure the soil is on the wet side before applying this concentrated stimulant. Raised beds of 4-5 in. of soil are generally safer than ground beds. Such beds can and generally do produce a better character of growth because soil dries out more quickly, allowing frequent thoro watering. This drying of the soil stimulates formation of new white roots and the necessarily more frequent watering introduces more air to the roots—aeration, and that's very necessary in promoting any growth. However, nearly

all our growing is done on deep ground beds which are all right if well drained and not watered until they need it. We use two lines of 4 in. tile in a 4 or 5 ft. bed. Besides their drainage value, these tiles are used for sub-irrigating some crops; also for steam sterilizing. Subirrigating should be used only for winter and perhaps spring crops because this method should leave the surface soil quite dry, which greatly encourages the spread of red spider during hot weather. Overhead wetting down or spraying 1-3 times daily during late spring and summer maintains a damp atmosphere so necessary for good Mum growth. Furthermore, if this is regularly attended to as it should be, there will be little or no outbreak of red spider that sometimes ruins a Mum crop. If this pest definitely breaks out, clean it up with the hose and clear water. The various chemicals recommended for this purpose we find tend to stunt or harden the growth, besides being costly.

We rarely change soil for any greenhouse crop, depending on either hot water or steam sterilizing. This treatment puts our soil in fine shape for any crop and is done annually for the main or winter crop and without further sterilizing or treatment, the soil will be in good shape for Mums. Because of the manure applied for the winter crop, nothing is needed for the Mums until the fall top dressings referred to. If not in position to sterilize soil, it will pay to change annually for Mums. We believe failures are sometimes, perhaps frequently due to excess water at the roots during summer. During hot weather, growth of this cool temperature crop is not at all active; for this reason it is easily overwatered and overmanured, resulting in decay of roots, explaining why they sometimes just won't grow. When this happens, their foundation is undermined and in a weakened condition; they become more susceptible to such diseases as dry up the foliage. But don't carry them too dry thru the summer, of course; watch this carefully. IT IS FAR MORE PROFIT-TO RESIST DISEASE ABLE SOUND CLEAN GROWING METHODS THAN WITH COSTLY FUNGICIDES. On the other hand, we recognize that such virulent diseases as Verticillium are not easily overcome with the best cultural methods. Such, or similar diseases, are best handled by pulling up and destroying infected plants. Also, some varieties are distinctly more susceptible or less resistant than others and should be discarded. Aphis must be held down with some form of nicotine in either spray or fumigant form. The same material is used to combat midge. This is the most costly pest the Mum grower has to contend with. An infestation of it requires months of steady application to really clean it up. It is quite safe to say very few growers are entirely free of it, and until they are 100% free of it, continual costly spraying is necessary to hold it in check, for it spreads fast, especially during the active growing season of the crop. Midge has shown up in England, but they seem able to control it there, probably because their growing, especially of propagating stock, is so largely done under the influence of the outdoors. Many varieties can be cleaned up here by growing stock plants in the open. But this doesn't apply to all, for some are clearly more susceptible than others. This is a striking example of the variation in the inherent nature of varieties. The most profitable suggestion for cleaning an infestation of this pest is to hold it in check as well as possible until the crop is cut away, then burn every vestige of the stock plants. Don't take a chance on throwing them out for the frost to destroy it. There is no available information to the effect that it won't live over in the greenhouse on other plants, but we don't believe it will. Growers who supply young stock should be in position to furnish proof of inspection from their state authorities showing them to be clean of midge. The spread of this pest in the greenhouse, especially during the Spring months, is remarkably fast and widespread. It has happened that cuttings furnished by us were a few months later reported full of midge, leaves being sent in to prove it. This is a very clear example of spread from the grower's own stock that was infected without him knowing it. The fact that a light infestation is easily overlooked by most growers makes it so difficult to clean out 100%.

SPACING

Spacing is an important planting detail and depends on the grade of flowers wanted. In growing the big ones, the largest flowers are not usually most profitable. An excellent market size is produced with a 7 x 8 in. spacing, one to a plant; but in growing for most markets, it will pay better to carry two flowers to each plant with this, or 8 x 8 in. spacing. This calls for less plants, but you should be prepared to replace the few weak ones that develop in any planting, for a miss when 2 flowers are involved is a loss. Most retail growers will find it more profitable with at least

part of their planting to produce 3 and 4 on individual plants with this spacing: they figure that more can be realized on 2-3 or 4 small to medium size flowers than for a single big one; and for at least part of a retail grower's stock, this reasoning is sound. The Paris, France market wants them all big—the bigger the better. London and England generally, prefer them small or medium. Most of their growing there is done in an 8 or 9 in. pot, 1 or 2 plants to a pot, according to the vigor of the variety. In each of these pots, 12-16 flowers are produced with which they tell you more profit is made than on a few big flowers. But there is an attraction and limited demand for the great big ones that shouldn't be overlooked. And it might be well to use some exhibition kinds for this. The Turners and the Pocketts are fine examples of this class. Most Pompon growers space their class around 7 x 7 in., top them once at a height of 6-7 in. and let them come. If topped again, as is sometimes done, they produce more branches or flower stems, but they will be correspondingly shorter stemmed and long stems are important, especially for market growers. To assure plenty of stem, we used a different plan the past season with success. This calls for spacing 6 x 6, topping uniformly at about 6 or 8 in. and carrying up but 2 growths. With the plant's energy so concentrated, stems do draw up. This spacing calls for more plants but results in a more uniform stand with no short, blind growth, and,—longer stems. Nearly all our stock is shaded and this calls for earlier planting if long stems are wanted and most short stemmed stock doesn't mean much to a wholesale market. We get all shading stock planted between May 10 and 15. ALSO, WE PLANT ONLY ROOTED CUTTINGS. Not only do cuttings represent less cost than early propagated older stock but, what is more important, a rooted cutting goes ahead without the check that the older plants get. For this reason, cuttings almost invariably outgrow topped, earlier propagated stock that usually becomes more or less checked before the final planting.

TAKING BUDS

For stock planted at normal dates and not shaded, the safest procedure is to follow suggestions on date to select buds given for each variety in this catalog. Late planting, say July, usually doesn't have time to make a Crown bud and the Terminal will be some later than dates given. The Crown bud is a large, rather early

formed one and generally not so safe as a Terminal that terminates the growth. The Terminal is distinguished by smaller ones clustered about the larger center one that should be used. When Crown buds are removed around early August on 3-4 ft. growth, the side growth that carries on leaves a joint at point where new growth begins. A heavy flower in handling might easily snap the stem at this point, besides water doesn't easily pass thru this hard joint. With late flowering varieties this joint is avoided by topping at a height of 12-14 in. The side growth carried up will usually make a Terminal and give a straight clear stem that can be cut above the joint made by topping referred to; this lessens the chances of wilting. We find this procedure doesn't apply to black cloth shaded stock that usually makes Terminal buds. The value of Crown and Terminal buds varies with varieties and seasons. If bud isn't in sight on date given for variety, use the first one that appears after date given.

POT PLANTS

The demand for well grown plants in pots is clearly increasing and can be helped along with well grown COMPACT plants. There is an active demand for such, especially in our large centers. Tall, straggly stuff, on the other hand, is not inviting to buyers and usually a loss to growers. But unsold pot plants can, of course, be cut down. In all potting or repotting, use clean fresh soil, for some of the diseases Mums are susceptible to are carried along in old greenhouse material. Also, soil should, when final repotting is done, which is usually into 5 in., be increasingly enriched. For good 6 in. specimens, cuttings should be ready to pot in April and at this rapidly growing season, strong cuttings can go directly into 3 in. DON'T LET THEM GET HARDENED OR CHECKED BY BECOMING POT BOUND IN SMALL POTS BEFORE SHIFTING. Usually two plants are used together in this final potting and for varieties not so vigorous, 3 plants are frequently used together. The first topping is usually done when the plants are in 3 in. and again in late June. Such varieties as are inclined to draw up, some topping or trimming back should be done late in July. Cuttings potted early in April for 6 in. plants will, by May 1, provide an excellent cutting that will make fine stock for finally putting 3 in a 5 in. pot. After the plants get into vigorous growth in their flowering pots, they must occasionally be helped along with light top

dressings of preferably a balanced fertilizer. We occasionally see nice plants grown in an outdoor frame all summer, but most specialists prefer to keep them in a low, well ventilated, unshaded house where they are protected from storms, hot winds, and insects. But the outdoor frame plan is a profitable one if the frame is sheltered from strong winds. It is particularly convenient if the plants are to be shaded for mid-September flowering. The effect of the full outdoors on pot plants is to harden, invigorate, and keep them compact. For this reason, greenhouse grown plants can well be exposed to the outdoors for a month or 6 weeks of mid-Summer. An important detail in the growing of pot plants is in the hands of the man with the hose. Right after potting, they can be easily turned yellow by excess water, but after they become well rooted and in full growth in a 5 in. pot, they absorb much water and quickly become dry enuf to harden and dry up lower foliage unless closely watched. We have seen an overhead sprinkling system used on outdoor grown stock to good advantage. But there is danger of overwatering with it unless closely watched. The Caprice varieties and the smaller flowered kinds, were formerly largely used for pot plant purposes. Today, while all classes are used, the large flowering ones are principally depended upon; your customers will select plants with largest flowers. The following are especially popular with one of the largest successful pot plant growers in the following order: Friendly Rival, Sun Gold, Ohio State, Glitters, Golden Herald, Hilda Bergen, Thanksgiving Pink, Apricot Queen, White Chief, and Justrite. And with this same grower, the following Pompons and Anemones are used in the order named: Nuggets, Rodell Imp., Red Rover, Beautiful Lady, Kathleen Thompson, Caprice Butler, and Little America. The cooler climate of England and Canada permits flowering an early class that naturally gets in around Sept. 1, averaging about half the size of our big Oct. kind and available in a full line of colors, we believe they should have some value for us as pot plants for they are fairly compact and quite free.

IN COLD HOUSES

Most of our Mum growing is done in structures consisting of nothing more than a roof—sides entirely open. They are frozen up over winter so we refer to them as "cold houses." We find them more profitable than our large modern houses for two

reasons: first being their low cost that reduces depreciation figure; second, free circulation of air thru them all summer enables better stock to be grown. Should it be necessary to do so for insects, the sides are closed in with Aster cloth. Most of these houses are built in the protected space between our large houses and are 20 ft. wide. We have noted high board fences for wind protection built around blocks of similar low cost structures. To guard against possible frost, and prolonged wet weather that might start decay in the large flowered kinds, we run 4-5 one in. steam pipes thru these houses. Sometimes this precaution saves a mid-October crop, tho all of them are used for October and a few early Nov. varieties that are flowered late Sept. thru the black cloth shading plan. Some of these houses have a permanent, regulation glazed roof, the sash does practically as well. Our latest idea in these houses makes use of a material known as Flexo Glass, a paraffined cloth, that we get from the Flexo Glass Co., 1457 N. Cicero Ave., Chicago, Ill. at a cost of around 16c a sq. yd. We get it in 3 ft. widths, attaching it to frames that are made to fit into 3 ft. spaced roof bars. The frames reach from gutter to ridge and are not placed in position until after buds are set. This plan is not only more economical than the glazed roof, but it leaves the growing crop fully exposed to air all thru the heat of summer. Furthermore, temperature for the plants is reduced some by stretching a thin grade of cloth (12 strands to the in.) over them thruout the summer. This protects them from the sun and wind and keeps the growth softer. The Flexo covered sash used with this plan is carefully stored, not in use over 3 months of the year, so should last at least 3 to 4 years if managed with some care. As equipped, we flower big Mums in these structures as late as Oct. 15-20, but at this date, we are prepared to close in the sides with sash for it sometimes freezes quite hard by this date in our latitude. The main crops in these houses are brought in Sept. 20 to Oct. 1, during which time they are usually safe except for the effect of 2-3 days of wet weather. Under these conditions, a few steam pipes more than pay for themselves. It must be remembered that big Mums are softer; therefore, more easily damaged than the harder little Pompons. Should heat in some form not be available to guard against wet cold weather, we should hardly, in our latitude, take a chance flowering big Mums in such cold houses later than Sept. 20-25. But

Pompons, we safely flower up to Oct. 10-15 in these houses without artificial heat. In fact, the past season, we cut flowers up to that date, in outdoor beds with no glass protection. But this was between two large houses which did protect them some.

EARLY FLOWERING

The history of commercial floriculture doesn't relate a more valuable discovery than the early flowering of Mums thru shade. It is due to their "short day" nature which means setting of buds with the shortening days of Fall. If the days continued long, they would not set. This is proven by treating them with lights to delay flowering, a procedure of some value that will be touched on. Briefly, shading consists of shortening daylight hours by applying some material about 5 o'clock in the evening and leaving it on until 7 o'clock the following morning. The degree of darkness required doesn't have to be total —about what is known as dusk in the evening. In fact, it is practically impossible to create total darkness at 5 or 6 o'clock. But if any considerable amount of light, such as an opening would permit, should stream in, the affected area will set up correspondingly later. A black sateen cloth furnished by a number of firms is largely and gives general satisfaction. However, there is some saving in the use of other material such as a light grade of Kraft paper supplied us by The Sisalkraft Co., 205W.Wacker Drive, Chicago, Ill., we have found does very well, especially for the top of beds. This costs 10c per sq. yd. made up to any width desired and is good for at least 2-3 yrs. Only possible objection we can suggest to its use is that it doesn't permit air to pass thru it as does cloth, creating a more smothering effect on the plants than does the more porous cloth. However, the shade produced is more dense. But we believe the paper has the best of the argument for the price difference is considerable. In large houses, the entire area, walks and all, are covered in about 18 ft. sections by unrolling the paper that is attached to a round pole. For the sides of beds, cloth works better and is suspended from a wire with rings that enable it to be pushed back when not in use. Wire is stretched over the beds to support the shading material. In building the supporting framework, we find a height of 5 to 6 ft. for Mums about right and $3\frac{1}{2}$ to 4 for Pompons. Also, if houses are not too wide or high, either cloth or paper can be applied right over the glass. We should also

state that if a night or two happens to be missed, no appreciable difference in flowering will be noted. Also, to avoid atmospheric moisture, don't spray overhead or water late in the afternoon. In fact, to prevent the spread of rot, it is sometimes advisable to remove the shading material after dark, for the sake of air circulation, returning it before daylight. Keeping the beds covered close thruout the night sets up a state of close humidity that favors the spread of rot or disease. Next season we will try the suggestion of starting the shade at about 3 o'clock instead of 6, making the morning shade unnecessary. This change would permit the complete rolling back of the shading material after dark and not replacing it in the morning, giving the plants full air circulation all night. A somewhat better grade of cloth might be required to produce the necessary degree of darkness at 3 o'clock than would be needed at 6. Otherwise this change in hours or time of shade should make no difference.

With large Mums, a few days over 3 weeks is required from start of shading to bud formation. For Pompons, enuf additional time must be allowed for getting some lateral buds set in addition to the terminal ones; fully 10 days extra time is usually needed to accomplish this. With October flowering varieties in both Mums and Pompons, about 60 days can be figured on from the start of shading until ready to ALSO, THE LATER A VARIETY IS, THE MORE TIME IS REQUIRED. Earlier than Sept. 15, few Mums are wanted; even at this date they are sometimes softened by heat and unless a variety is naturally somewhat hard, it is inclined to spot or rot; sometimes losses from this are serious. To flower Sept. 15, means that shading should begin July 15. Several shading dates should be used to avoid having the entire crop at one time.

VARIETIES FOR EARLY SHADING

This catalog indicates such with an S as a prefix.

Shading for early flowers is confined almost entirely to getting Oct. varieties in from mid-Sept. to early Oct. The choicer Nov. varieties can also be flowered in Oct. and we sometimes do this to some advantage by using the cloth that has set the earliest crop. An example of this is Gladys Pearson that we start shading Aug. 25 with cloth that was used on the first shading July 5 to Aug. 5 or 10. This treatment of Gladys Pearson gets it in by around Nov. 1, nearly a month ahead of its normal

time. While some Nov. varieties are superior, we now have a splendid lot of Oct. kinds that lend themselves well to shading. The first requirement for this purpose is hardness or durability of flower. A soft variety flowered around 10-15th of Sept. in our latitude is almost certain to be lost thru rot or spotting of petals. Heading most anybody's list of big Mums for shading to flower in Oct., we find the following most suitable in the order named: Good News, Detroit News, Silver Sheen, Pink Chief, Betsy Ross, C. W. Johnson, and Apricot Queen. The second factor to consider in flowering early is color. Most any white and clear yellow will color perfectly. But the pink and bronze will come much lighter when flowered during warm weather. Even Gladys Pearson flowered Nov. 1 will, if the weather is warm, be much lighter than when it comes naturally; and if it is flowered around mid-Oct., it will come clear golden yellow. If Apricot Queen is flowered a month ahead of its normal date, which is Oct. 25, it will be a clear golden yellow—very excellent and of good size. We find Pink Chief about the best in its color for early shading but when the color of early Oct. flowers is compared with those of its normal date, they will be found much lighter. This fading down of color is quite natural for heat has the same effect on any flowers.

Nearly all Pompons are much harder than the big ones for it seems to be a natural law in flowers that size should be at the cost of hardness. The pink and

bronze kinds will, of course, fade some but not to the extent that the big ones will. To a lesser extent, this is true of the Anemones as well. The following Pompons are most valuable in the order named, for late Sept. flowering: Nuggets, Pink Dot, Rodell Imp., Minong, Yellow Dot, Jessie, Arcadia, and Vera Victoria.

It should be remembered that varying conditions make for contradictory results and this is especially true of Mums flowered out of season. But this method has become quite well standardized and it fills a distinct need, for as cool fall weather sets

in after mid-Sept., our public naturally turns to Mums. To ship them from a market 2000 mi. away is not only economically wrong, but a loss to our growers as well.

TO DELAY FLOWERING

This is done thru prolonging daylight with electric lights as already suggested. For mid-season kind, turn on lights about Aug. 20. For December varieties, start a week later. Do not start later, or finished stock will tend to have long necks and sometimes, malformed flowers. Use 40 Watt bulbs with reflectors. Space lights 5 feet and high enuf to spread the light well over the bed. Turn lights on when darkness is reached and for 3 hours daily. Continue the lighting for three-fourths as many days as it is wished to delay flowering; in other words, if you wish to defer flowering 20 days, keep the lights on them 15 days. It is not considered practical to delay flowering more than 3 or 4 weeks. Take first bud showing after light treatment stops. While the behavior of varieties varies under this treatment, success with the above suggestions has been fairly uniform.

In conclusion, the writer well recalls a remark made just 45 years ago to the effect that Mums had about reached as high a state of perfection as it was possible to achieve. It would be just as wrong to make such a prediction today for the total market value and the improvement of Mums is increasing annually. Long graceful stems, rich, attractive colors and adaptability are reasons for their staple value.



Nice bed of Pink Dot grown in our Aster cloth house. Cuttings planted May 10; shaded July 10 to Aug. 10; photo taken Sept. 20. We consider Pink Dot one of the finest varieties for this early outdoor shaded crop.

BETTER MUMAS 119

As with everything we grow, some Mum crops are profitable, others are not. Good stems, clean foliage and flowers—such stock usually sells, especially if in the better kind, because it's usually not plentiful. Next to good growing comes the better or most suitable varieties. While we cannot be certain of what is best for your demands and conditions, chances are we can, and gladly will be, of some service in this. Mums in all classes are improving steadily. It is our business and yours to keep up with them. Always happy to hear from you.

GEO. J. BALL, Inc., West Chicago, III.

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